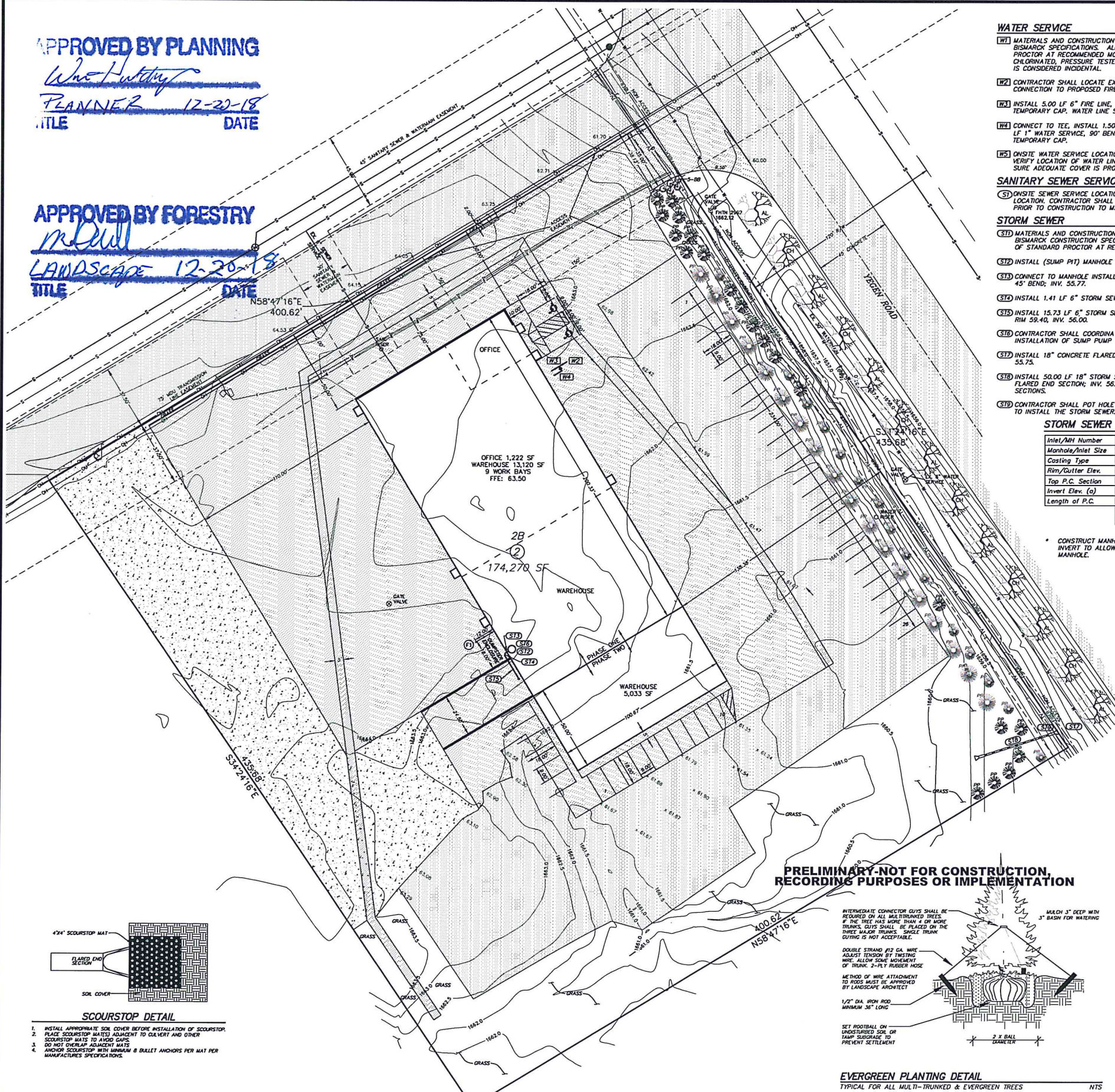


APPROVED BY PLANNING
Wm. Hutton
PLANNER 12-20-18
TITLE DATE

APPROVED BY FORESTRY
M. D. D. D.
LANDSCAPE 12-20-1
TITLE DATE



WATER SERVICE

- W1** MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH CITY OF BISMARCK SPECIFICATIONS. ALL BACKFILL SHALL BE 95% OF STANDARD PROCTOR AT RECOMMENDED MOISTURE CONTENT. WATERLINES SHALL BE COVERED WITH 18" OF GRANULAR FILL, COMPACTED FOR 2 HOURS AND FLUSHED. TESTING IS CONSIDERED INCIDENTAL.
- W2** CONTRACTOR SHALL LOCATE EXISTING WATER SERVICE TO MAKE CONNECTION TO PROPOSED FIRE LINE.
- W3** INSTALL 5.00 LF 6" FIRE LINE, 8"x1" TEE, 5.00 LF 6" FIRE LINE AND TEMPORARY CAP. WATER LINE SHALL HAVE MINIMUM 7.5 FEET COVER.
- W4** CONNECT TO TEE, INSTALL 1.50 LF 1" WATER SERVICE, 1" CURBSTOP, 1.50 LF 1" WATER SERVICE, 90° BEND, 5.00 LF 1" WATER SERVICE AND TEMPORARY CAP.
- W5** INSITE WATER SERVICE LOCATION IS UNKNOWN. CONTRACTOR SHALL VERIFY LOCATION OF WATER LINE PRIOR TO CONSTRUCTION TO MAKE SURE ADEQUATE COVER IS PROVIDED.

SANITARY SEWER SERVICE

- (S1) ONSITE SEWER SERVICE LOCATION IS SHOWN IN AN APPROXIMATE LOCATION. CONTRACTOR SHALL VERIFY LOCATION OF SEWER SERVICE LINE PRIOR TO CONSTRUCTION TO MAKE SURE ADEQUATE COVER IS PROVIDED.

STORM SEWER

- (S31) MATERIALS AND CONSTRUCTION METHODS SHALL COMPLY WITH CITY OF BISMARCK CONSTRUCTION SPECIFICATIONS. ALL BACKFILL SHALL BE 95% OF STANDARD PROCTOR AT RECOMMENDED MOISTURE CONTENT.
- (S32) INSTALL (SUMP PIT) MANHOLE NO. 1; RIM:63.50; INV. 55.71.
- (S33) CONNECT TO MANHOLE INSTALL 4.33 LF 1.8476X 6" STORM SEWER AND 45" BEND; INV. 55.77.
- (S34) INSTALL 1.41 LF 6" STORM SEWER AT 1.4184X AND 45" BEND; INV. 55.79
- (S35) INSTALL 15.73 LF 6" STORM SEWER AT 1.3350X AND INSTALL INLET NO. RIM 59.40; INV. 56.00.
- (S36) CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR INSTALLATION OF SUMP PUMP AND DISCHARGE PIPING.
- (S37) INSTALL 18" CONCRETE FLARED END SECTION AND SCOURSTOP; INV. 55.75.
- (S38) INSTALL 50.00 LF 18" STORM SEWER AT 0.5000X AND 18" CONCRETE FLARED END SECTION; INV. 56.00. LENGTH IS FROM END OF FLARED END SECTIONS.
- (S39) CONTRACTOR SHALL POT HOLE AND LOWER ANY UTILITIES AS NECESSARY TO INSTALL THE STORM SEWER.

STORM SEWER MANHOLE/INLET SCHEDULE

Inlet/Manhole Number	Manhole #1	Inlet #1
Manhole/Inlet Size	48"	18"
Costing Type	NEEDMAN B-1733 R/ SOLID COVER	18" HDPE/PLAST DIAPHRAGM BASIN
Rim/Gutter Elev.	63.50	59.40
Top P.C. Section	62.71	---
Invert Elev. (a)	55.71	56.00
Length of P.C.	• 9.00	

- CONSTRUCT MANHOLE TWO FEET DEEPER THAN PLAN INVERT TO ALLOW FOR BEND TURNED DOWN IN MANHOLE.

PLANT PALETTE

	SYM.	COMMON NAME	SCIENTIFIC NAME	SIZE	QNTY.
TREES	PP	PONDEROSA PINE	<i>Pinus ponderosa</i>	1-1/2" Cal.	21
SHRUBS	BB	CRIMSON PYGMY BARBERRY	<i>Berberis thunbergii</i> 'Crimson Pygmy'	2 Gallon	5

PLANT PALETTE (FUTURE STREET TREES)

	SYM.	COMMON NAME	SCIENTIFIC NAME	SIZE	QNTY.
TREES	AL	AMERICAN LINDEN	<i>Tilia americana</i>	1-1/2" Cal.	7
	CH	COMMON HACKBERRY	<i>Celtis occidentalis</i>	1-1/2" Cal.	6

LANDSCAPING REQUIREMENTS

REQUIRED INTERIOR LANDSCAPING: N/A	PROVIDED INTERIOR LANDSCAPING: N/A
REQUIRED STREET TREES: 3 PER 100 FEET = 13 TREES	PROVIDED STREET TREES: NONE

DUE TO YEGEN ROAD BEING A RURAL SECTION, A WAIVER IS REQUESTED TO NOT INSTALL ANY STREET TREES AT THIS TIME.

<p>REQUIRED PERIMETER PARKING: 1 TREE AND 5 SHRUBS/25 LINEAR FEET = 18 TREES AND 88 SHRUBS OR 1 TREE SUBSTITUTED FOR 3 SHRUBS TOTAL OF 48 REQUIRED TREES</p>	<p>PROVIDED PERIMETER PARKING: EXISTING 36 TREES (3 REMOVED FOR STORM SEWER INSTALLATION) ADDITIONAL 21 TREES INSTALLED AND 5 SHRUBS</p>
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6" CONCRETE IN PAVED AREAS
18" STANDARD GRATE
12" MIN WIDTH

Diagram illustrating the relationship between invert, depth, and adapter angles for a vertical pipe section.

- INVERT ACCORDING TO PLANS/TAKE OFF**: Points to the bottom of the pipe section.
- DEPTH PER PIPE MANUFACTURER RECOMMENDATION**: Points to the top of the pipe section.
- ADAPTER ANGLES VARIABLE 0° - 360° ACCORDING TO PLANS**: Points to the adapter connecting the pipe to the structure above.

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS 1

OR CLASS II MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE WELL PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321 AND MANUFACTURERS RECOMMENDATIONS.

NY PLAST DRAIN BASIN

NW/ EAST DRAIN BASIN
N.T.S.

GENERAL LANDSCAPING NOTES FOR ALL SHEETS

- ❖ ALL CONTRACTORS WISHING TO SUBMIT BIDS FOR THIS LANDSCAPING PROJECT SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL CONDITIONS.
- ❖ PROTECT THE IMPROVEMENTS ON SITE AND ON THE ADJOINING PROPERTIES. PROVIDE BARRICADES, COVERINGS OR OTHER TYPE OF PROTECTION AS NECESSARY TO PREVENT DAMAGE AND TO SAFEGUARD AGAINST INJURY TO EXISTING UTILITIES.
- ❖ DAMAGE THAT OCCURS TO PLANTS DURING TRANSPORTATION AND INSTALLATION WILL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
- ❖ ALL LANDSCAPE PLANTINGS ARE TO BE WATERED BY THE LANDSCAPE CONTRACTOR THE SAME DAY THAT THE PLANTING OCCURS. IF WATER IS NOT AVAILABLE AT THE BUILDING, THE LANDSCAPE CONTRACTOR SHALL PROVIDE ALTERNATIVE METHODS FOR WATERING.
- ❖ SOLITARY TREES DO NOT NEED TO BE EDGED AROUND, HOWEVER ORGANIC WOOD MULCH SHALL BE PLACED AROUND THE TREE IN A MUTTLE RING THAT CONFORMS TO THE DETAIL PROVIDED FOR TREE PLANTINGS.
- ❖ CONTRACTOR SHALL PROVIDE WRITTEN WARRANTIES CONTAINING THE FOLLOWING:
 FURNISHED TREES GUARANTEED TO LIVE AND REMAIN STRONG, VIGOROUS, AND HEALTHY CONDITION FOR 365 DAYS MINIMUM FROM DATE LANDSCAPE INSTALLATION IS ACCEPTED AS COMPLETED.
- ❖ LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND CARING FOR ALL PLANT MATERIAL, AND OTHER LANDSCAPING IMPROVEMENTS UNTIL THE DATE OF FINAL INSPECTION AND APPROVAL.

TOPSOIL NOTES

- 12) TOPSOIL SHALL BE IMPORTED AND PLACED AND SEEDED AS SOON AS PRACTICAL TO MINIMIZE WIND AND WATER EROSION. BACKFILL BEHIND CURB AND GUTTERS AND SIDEWALK AS SOON AS REASONABLE TO PREVENT STANDING
























WATER AND PROTEIN

- ## SEEDING NOTES
- SEEDING SHALL CONFORM TO THE MOST RECENT VERSION OF THE CITY OF BISMARCK CONSTRUCTION SPECIFICATIONS FOR MUNICIPAL PUBLIC WORKS IMPROVEMENTS FOR SEEDING EXCEPT WHERE MODIFIED HEREIN.
 - CLEAR AND GRUB SITE BEFORE SEEDING ENSURING THAT THE SITE IS IN A SMOOTH CONDITION WITH NO DEBRIS OR ROCKS LARGER THAN 2" IN DIAMETER.
 - FERTILIZE SOIL DURING THE SEEDING PROCESS USING AN APPROPRIATE APPLICATION PROCESS. FERTILIZER SHALL BE 10-10-10 AND APPLIED AT A RATE OF 4 LBS. PER 1000 SQUARE FEET.
 - SEED SHALL BE CLASS II FOR SUNNY AREAS PER CITY OF BISMARCK SPECIFICATIONS AND DRILL SEED TO A DEPTH OF 1/4" TO 1/2" AND SEED SHALL BE EVENLY SPREAD. AFTER SEED HAS BEEN SOWN, THE SOIL SHALL BE COMPACTED IMMEDIATELY AFTER THE SEED IS APPLIED TO THE SOIL AROUND THE SEED. NO SEED SHALL BE PLACED ON DAYS WHERE THE WIND IS STRONG ENOUGH TO PREVENT IT FROM BEING PROPERLY IMBEDDED INTO THE SOIL.
 - SEED MUST SHOW A DENSITY OF 20 TO 30 SEEDLINGS PER SQUARE FOOT BEFORE ACCEPTANCE WILL OCCUR. THE CONTRACTOR SHALL FURNISH AND REPLACE WITH ADDITIONAL SEED COORDINATION THEREFOR. ANY SEED FOR AREAS THAT HAVE NOT GERMINATED, HAVED DIED, OR ARE DAMAGED TO THE EXTENT THAT REPLACEMENT IS REQUIRED TO CONFORM TO THE REQUIREMENTS OUTLINED ABOVE, THE CONTRACT WARRANTY PERIOD SHALL ALSO APPLY TO THIS ITEM.
 - CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR ANY EROSION SCARS OR WASHOUTS UNTIL THE DATE THAT FINAL SOW STAND IS ACCEPTED. SEE EROSION CONTROL PLAN FOR EROSION CONTROL METHODS.
 - ALL PORTIONS OF THE SITE THAT ARE TO BE SEEDDED SHALL BE HYDROMULCHED. HYDROMULCH SHALL BE A WOOD CHIP MULCH WITH NO FERTILIZER. MULCH SHALL BE FREE OF GERMINATION OR GROWTH INHIBITIVE SUBSTANCES, AS WELL AS ANY NOXIOUS WEED SEED. MULCH SHALL BE TREATED WITH A TACK AND FIBER TO ENHANCE SEED AND MULCH PLACEMENT AND ADHERENCE TO THE SOIL. THE HYDROMULCH SHALL BE APPLIED AT A RATE OF 2000 LBS./ACRE

BLUMBERG ENCLOSED

- (1) A 6' HIGH OPAQUE VINYL FENCE WILL BE CONSTRUCTED ON THE NORTHEAST SIDE OF THE DUMPSTER ENCLOSURE. THE OTHER TWO SIDES OF THE ENCLOSURE ARE SCREENED BY THE BUILDING.

LEGEND

- | | |
|---|----------------------------------|
|  | EXISTING SANITARY SEWER |
|  | EXISTING WATERMAIN |
|  | EXISTING STORM SEWER |
|  | EXISTING UNDERGROUND ELECTRIC |
|  | EXISTING UNDERGROUND GAS |
|  | EXISTING UNDERGROUND CABLE TV |
|  | EXISTING UNDERGROUND FIBER OPTIC |
|  | EXISTING OVERHEAD POWER |
|  | EXISTING UTILITY RISER-VAULT |
|  | EXISTING LIGHT-POWER POLE |
|  | EXISTING VALVE |
|  | EXISTING FIRE HYDRANT |
|  | EXISTING CONCRETE |
|  | EXISTING GRAVEL |
|  | EXISTING CONTOUR |
|  | EXISTING GRADE |
|  | EXISTING TREE |
|  | PROPOSED STORM SEWER |
|  | PROPOSED FENCE |
|  | PROPOSED CONCRETE |
|  | PROPOSED CONTOUR |
|  | PROPOSED GRADE |
|  | PROPOSED TREE |



30'

SCALE - 1" = 30'

NAVD 88 DATUM

NOVEMBER 6, 2018

**FOR REGULATORY
REVIEW ONLY
- NOT FOR
CONSTRUCTION**

**DIMENSION, UTILITY &
LANDSCAPE PLAN**

LOT 2B OF LOT 2 BLOCK 2
MISSOURI VALLEY COMPLEX FIRST REPLAT

SWENSON, HAGEN & COMPANY P.C.

909 Basin Avenue
Bismarck, North Dakota 58504
shc@swensonhagen.com
Phone (701) 223-2600
Fax (701) 223-2606

Surveying
Hydrology
Land Planning
Civil Engineering
Landscape & Site Design

DRAWN BY: CK
CHECK BY: JP
DATE: NOV. 6, 201

PROJ.#: _____
COMPUTER FILE:
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VALLEY COMPLEX
REPLAT\L2B2 SITE PL

SHEET
C4.0

(Bismarck\Missouri Valley Complex\First Replat\Lot 2b Block 2(NW Tire)\L2B2 SITE PLAN NORTHWEST TIRE with addition.dwg. 12/18/2018 9:09:48 AM 1:1